

This application is a continuation-in-part of International Application PCT/SE02/00079, having an International filing date of January 18, 2002, ~~published in English under PCT Article~~

FIELD OF INVENTION

The present invention relates to a vehicle door inner panel comprising a front end wall, a rear end wall and a reinforcing beam attached between said walls, such as to enable impact forces emanating from a collision to be transmitted from the door pillar or pillar to which the door is attached to the door pillar situated behind the door.

DESCRIPTION OF THE BACKGROUND ART

Car doors are typically comprised of an inner panel, which forms the supportive part of the door, and a lacquered outer panel. The inner panel is covered with a detachable panel, i.e. so-called trim.

In the construction of a car, it can be chosen to allow the door to transmit force or load from the A-pillar to the B-pillar, in the event of a frontal collision. A-pillar is the accepted designation of the windscreen-adjacent pillar on which the front door is hung, while B-pillar is the designation of the pillar situated behind the front door, i.e. between the doors when two doors are situated on respective sides.

In order to provide hinge space, these two pillars do not normally reach the outsides of the doors. The beam located beneath the window, the waist rail, is situated on the inside of the window and often overlaps the pillars, so as to be able to transmit force directly between the pillars. However, it is disadvantageous to give this beam a high degree of rigidity or stiffness, since it is desirable for the door to yield in the event of a side-on impact. A side impact guard will preferably be situated as far out in the door as possible, so as to obtain the largest possible deformation zone, and car models exist which have a straight beam or bar which is located on the outside of the side-window guide rails and fixed in bracket means which are welded to the end walls of the inner panel and extend towards the insides of said walls, so as to overlap the pillars and therewith be able to transmit force between the pillars and the side impact beam.

